

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 11, line 9 and ending at line 25 of the specification as follows:

Examples

<a> Steel SM490A for general weld structure was used so that partial penetration welding was carried out on a bead-on-plate. At the time of welding, in order to prevent occurrence of the weld defects, as shown in Fig. 7, a laser output was varied by a triangular wave with peak output of 20 kW and base output of 8 kW. Rise time at which the base output varies into the peak output was 10 ms which is constant, and the frequency was changed within the range of 10 Hz to 98 Hz. The device having the constitution shown in Fig. 3 was used, and the light emission strength of the plasma at the time of welding was measured by Si photodiode 2 (Si-Pd) with a sensitivity wavelength range of ~~190 to 1100 μ m~~ 190 to 1100nm at a sampling frequency of 50 kHz. Si-PD was installed on a horizontal extension of the same level as an object to be welded (6). A laser (4) beam was converged on the surface of the object to be welded (6) by a parabolic mirror (5) with a focal distance of 500 mm. A test piece with width of 20 mm, height of 30 mm and length of 250 mm was used, X-ray transmission test was conducted in the widthwise direction after welding, and a percentage (%) of a weld defect total area with respect to a molten cross section was used as a ratio of defect occurrence so that a state of the weld defects was quantified.